

Remarks

Claim 17 has been cancelled. Claims 15 and 16 are amended. No new claims are added. No new matter had been added by these amendments.

Initially, applicants request reconsideration of the finality of the present rejection. Despite the Examiner's comments at page 7 of the Office Action, the new rejection of claims 1 and 15-23 as anticipated by Bruckner, et al. was not necessitated by or the result of the Amendment dated July 5, 2006. To the extent that Bruckner, et al. is applicable to the claims, it was as applicable before the June 5, 2006 Amendment as it is now after the Amendment. Thus, applicants' Amendment did not necessitate the new ground of rejection and therefore, applicants respectfully request that the finality of this Office Action be withdrawn.

At pages 2 and 3 of the Office Action, the Examiner contends that applicants' claim to priority from the PCT and British applications is untimely. In response, applicants have petitioned to accept the claim of priority because of an unintentional delay. A copy of that Petition is attached hereto. Therefore, upon the granting of the Petition, applicants' claim of priority should be allowed.

Applicants acknowledge with gratitude the withdrawal of the rejection of claims 15-18 under 35 U.S.C. § 101 and the withdrawal of all previous rejections under 35 U.S.C. § 112, second paragraph.

At page 3 of the Office Action, claim 15 has been rejected under 35 U.S.C. § 112, second paragraph, as indefinite because of the language "such as". Claim 15 has been amended to delete this language and therefore, this rejection is deemed moot.

At pages 4-5 of the Office Action, claims 15, 16 and 18 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Specifically, the Examiner contends that the amendment to the chemical structures of claims 15 and 18 (changing the carboxyl oxygen bound to a hydrogen to a “conventional” carbon-bound hydroxyl) and the amendment to the Marbush members in claims 15 ($\text{CH}(\text{R}_5)\text{OH}$) and 18 constitute new matter.

Applicants cannot locate the Marbush group the Examiner is referring to in claim 18. Likewise, although claim 16 was rejected, the Examiner has not stated what amendment to or portion of claim 16 has resulted in the rejection.

Nevertheless, the rejection is respectfully traversed. The corrections to the claims correct the obvious typographical errors. The specification, when read as a whole, clearly shows this. For convenience, applicants shall refer to the published specification, Pub. No. US 2005/0032188 A1 (hereinafter “‘188 pub.”).

Turning to the ‘188 pub. specification, the general formula for the claimed compounds appears in paragraphs [0049] and [0050]. These are also the compounds claimed in original claim 15. The typo is in the definition of the Z moiety, which is defined as $\text{C}(\text{R}_5)\text{O}-$. This is a clear error because the carbon only has three bonds. The required fourth bond is to a H, which was left out.

The fact that a H was left out of the definition of the Z can be seen in the next, “preferred” examples disclosed in paragraphs [0053] and [0054]. These compound are also claimed in original claim 16. There, the Z moiety is shown at the 1-position of the benzyl ring, and clearly shows a H bound to the carbon. Also, in place of R_5 , this “preferred” compound shows a R_8 moiety.

There is also one clear error in this compound, i.e. the double bond between the carbon and the hydroxy. This is an unquestionable mistake since as drawn, the carbon has five bonds

and the O of the hydroxy has three bonds, which are not possible. Rather, the bond between the carbon and the hydroxy should be a single bond, thus resulting in a compound where the carbon has four bonds and the oxygen has two bonds.

The structure shown in paragraphs [0056] and [0057], also claimed in original claim 18, is clearly inadvertently missing two elements. These compounds are described as a “particularly preferred group”, thus even more preferred than the compounds disclosed at [0053] and [0054]. It show the same C and R₈ at the 1 position of the benzyl, just as at paragraphs [0053] and [0054]. What were inadvertently deleted, however, are the H and –OH off the carbon, as shown at [0053].

Should there be any doubt that the above are the compounds of the claimed invention, the Examiner’s attention is respectfully directed to paragraph [0083] “Experimental procedures” and [0084]. This shows a synthesis of the claimed compounds.

First described is “Synthesis of 1-(2-nitrobenzyl)ethanol.” Note that to arrive at this compound, the Z moiety of paragraphs [0049] and [0050] and claim 15 must be CH(R₅)OH and the moiety at the 1 position of the benzene ring of the compounds shown in paragraphs [0053] and [0054] and claim 16, as well as the compounds shown in paragraphs [0056] and [0057] and claim 18, must be as shown in the amended claims. Thus, paragraphs [0083] and [0084], as well as the ensuing experimental data (see, e.g., paragraph [0087] referring to HBE, defined in paragraph [0083] as 1-(2-nitrobenzyl)ethanol), show clear support for the amendments to the claims and show that these amendments are not new matter.

For the above reasons, reconsideration of the written description rejection and allowance of claims 15, 16 and 18 are respectfully requested.

Claims 1 and 15-23 remain rejected under 35 U.S.C. § 102(b) as anticipated by Eby, Thompson and Goldmacher. These rejections are respectfully traversed.

Eby simply teaches the coupling of 2-(4-nitrophenyl)ethanol to the hydroxyl group of an oligosaccharide. These are not multiple active sites which have a biological activity as in an antibody, but rather are simply hydroxyl residues.

Upon irradiation, the 2-(4-nitrophenyl)ethanol moieties fall off, giving the original oligosaccharide. The activity of the oligosaccharide is unaffected, however, since it has no activity to begin with. Thus, "restoration of the active site(s)" after the moieties fall off, as required by claim 1, cannot occur.

The oligosaccharide of Eby does not actively bind to an antibody. In fact, the opposite is true – an antibody binds to the oligosaccharide. The antibody cannot recognize the oligosaccharide when it has a different chemical structure; e.g., is coated with 4-nitrobenzyl residues. It is easy to hide haptens using photolabile protecting groups, and this has been done on numerous occasions over many years, for example, peptide synthesis from amino acids. The present invention, in contrast, is much more difficult and surprising – altering the protein (antibody) activity – which has never been done before.

In addition, Eby uses 2-(4-nitrobenzyl) ethoxycarbonyl groups. The present invention uses 1-(2-nitrobenzyl) ethoxycarbonyl groups. These are two different structures.

For all the above reasons, reconsideration of this rejection and allowance of all claims over Eby are respectfully requested.

Thompson is not a prior art reference. Thompson was published in 1994. The instant application claims priority from British Application No. 9322156.2 filed October 27, 1993.

Accordingly, reconsideration of this rejection and allowance of all claims are respectfully requested.

Goldmacher, discussed at page 7 of the Office Action, does not anticipate the claimed invention. In Goldmacher, an active antibody is linked to a toxin via one highly selective 2-nitrobenzyl bridge which binds directly to the active site of the toxin. The antibody is unaffected by this procedure and it targets tumors as normal. Indeed, if the antibody were affected, the Goldmacher procedure would not work. Compare to claim 19. Also, there is only one 2-nitrobenzyl bridge formed, not the plurality of labile residues required by claim 1. Finally, the 2-nitrobenzyl moiety of Goldmacher is different from the compounds claimed in claims 15, 16 and 18.

For all of these reasons, applicants submit that Goldmacher does not anticipate any of the pending claims.

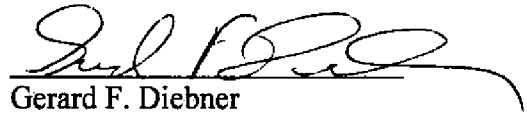
Finally, the Examiner has rejected all pending claims as anticipated by Bruckner. Bruckner, however, is not prior art. Bruckner was published in 1995 and the instant application has a priority date of October 27, 1993. Accordingly, withdrawal of Bruckner as a reference is respectfully requested.

A three month extension of time fee of \$510.00 is due for the filing of this Amendment. Please deduct that fee and any additional fees resulting from the filing of the Amendment, from our Account No. 50-1561.

A good faith effort has been made to place this application in condition for allowance. If the Examiner has any questions or comments, the Examiner is invited to contact the undersigned at (212) 801-2134.

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By: Respectfully submitted,



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